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(54) Title: IMPROVED POROUS MULLITE BODIES AND METHODS OF FORMING THEM

(57) Abstract: A porous mullite composition is made by forming a mixture of one or more precursor compounds having the elements present in mullite (e.g., clay, alumina, silica) and a property enhancing compound. The property enhancing compound is a compound having an element selected from the group consisting of Mg, Ca, Fe, Na, K, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, B, Y, Sc, La and combination thereof. The mixture is shaped and to form a porous green shape which is heated under an atmosphere having a fluorine containing gas to a temperature sufficient to form a mullite composition comprised substantially of acicular mullite grains that are essentially chemically bound.

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<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 7 C04B35/185 C04B35/622 C04B38/00 B01D39/20		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) IPC 7 C04B B01D		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, PAJ, INSPEC, WPI Data, CHEM ABS Data, COMPENDEX		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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* Special categories of cited documents : *A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family		
Date of the actual completion of the international search  13 October 2004		Date of mailing of the international search report  27/10/2004
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer  Vathilakis, S

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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